

In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-32 (Cancelled)

33. (Currently amended) The method according to claim ~~[[32]]~~ 38 wherein the anchor molecule comprises an aminoalkylsilane molecule.

34. (Currently amended) The method according to claim ~~[[32]]~~ 38 wherein the chemically activated surface of the implant material is provided with an oxide layer prior to covalent binding of the anchor molecule.

35. (Cancelled)

36. (Currently amended) The method according to claim ~~[[35]]~~ 45 wherein the **bone growth factor BMP protein** is BMP-2 or BMP-7.

37. (Cancelled)

38. (Currently amended) A method of immobilization of a mediator molecule on an implant material, comprising:

covalently binding an anchor molecule to a chemically activated surface of the implant material, wherein the anchor molecule has a functional group having sufficient reactivity to allow covalent binding of a chemical compound;

binding ~~[[a]]~~ an agarose spacer molecule to the anchor molecule, wherein the agarose spacer molecule has an additional functional group having sufficient reactivity for covalent binding of the mediator molecule;

covalently immobilizing a mediator molecule on the implant material using the additional functional group;

wherein the mediator molecule comprises a biomolecule that at least one of (a) reduces rejection of the implant material, and (b) promotes growing-in of the implant material; and

wherein said implant material comprises at least one component selected from the group consisting of a metal, a metallic alloy, and a ceramic material.

39. (Cancelled)

40. (Cancelled)

41. (Currently amended) An implant with a mediator molecule immobilized thereon produced by the method of claim ~~[[32]]~~ 38.

42. (Previously presented) The implant according to claim 41 wherein the metal of the implant material comprises titanium, aluminum, or stainless steel, wherein the metallic alloy of the implant material comprises titanium, and wherein the ceramic of the implant material comprises hydroxyapatite.

43. (Cancelled)

44. (Cancelled)

45. (Currently amended) The method according to claim ~~[[35]]~~ 38 wherein the biomolecule is BMP protein.

46. (Currently amended) The method according to claim ~~[[35]]~~ 38 wherein the biomolecule is ubiquitin.

47. (New) The method according to claim 38 wherein the biomolecule is an antibiotic.